

WHAT IS CLAIMED IS:

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1. A control apparatus for input screens that is installed in a vehicle and constructed to input predetermined operation performed by an operator based on information displayed by display device as an operator guidance and change information to be displayed by the display device upon input of the operator guidance, comprising:

operation nullification device that prohibits the predetermined operation performed by the operator from being inputted as the operator guidance upon fulfillment of a predetermined condition; and

operation nullification canceller that cancels prohibition against the inputting of the predetermined operation performed by the operator as the operator guidance if a predetermined time period has elapsed since the prohibition against the inputting of the predetermined operation performed by the operator as the operator guidance.

2. The control apparatus according to claim 1, wherein:

the operation nullification device is constructed to judge whether or not the predetermined condition has been fulfilled, depending on information displayed by the display device.

3. The control apparatus according to claim 1, further comprising:

first operation device for performing the predetermined operation based on a first action made by the operator; and

second operation device for performing the predetermined operation based on a second action made by the operator, the second action being different from the first action, wherein:

the operation nullification device that judges whether or not the predetermined condition has been fulfilled, depending on whether the

predetermined operation is performed by the first operation device or by the second operation device.

4. A control apparatus for input screens that is installed in a vehicle,
5 comprising:

screen controller that causes display device to display information including a plurality of dummy switches and changing the information displayed by the display device to information corresponding to the operated dummy switch; and

10 operation nullification device that nullifies operation of the dummy switch upon fulfillment of a predetermined condition and prohibits information displayed by the display device from being changed based on the operation, wherein the operation nullification device is constructed to judge whether or not the predetermined condition has been fulfilled, depending on the
15 number of dummy switches included in information displayed by the display device.

5. The control apparatus according to claim 4, further comprising:
operation nullification canceller that cancels nullification of operation of
20 the dummy switch if a predetermined time period has elapsed since the start of nullification of the operation by the operation nullification device.

6. The control apparatus according to claim 4, further comprising:
operation nullification canceller that cancels nullification of the operation
25 of the dummy switch by the operation nullification device if the vehicle has stopped.

7. The control apparatus according to claim 4, further comprising:
first operation device for performing the predetermined operation based on

a first action made by the operator; and

second operation device for performing the predetermined operation based on a second action made by the operator, the second action being different from the first action,

5 wherein the operation nullification device is constructed to judge whether or not the predetermined condition has been fulfilled, depending on whether the predetermined operation is performed by the first operation device or by the second operation device.

10 8. A control apparatus for input screens that is installed in a vehicle and constructed to cause display device to display information including a plurality of dummy switches and cause the display device to display new information corresponding to one of the dummy switches that has selectively been operated, comprising:

15 summation time period calculator that estimates a time period required for an operator to watch the displayed information to selectively operate one of the dummy switches included in the displayed information during a period from the start to the stop of the vehicle, estimates a time period required for the operator to watch newly displayed information to selectively operate one
20 of a plurality of dummy switches included in the newly displayed information, and calculates a sum of the estimated time periods; and

operation nullification device that nullifies operation performed by the operator for selection of one of a plurality of dummy switches included in the newly displayed information if the summation time period is longer than a
25 reference time period, and prohibits new information corresponding to the operated dummy switch from being displayed by the display device.

9. The control apparatus according to claim 8, further comprising:
operation nullification canceller that cancels nullification of operation of

the dummy switch if a predetermined time period has elapsed since the start of nullification of the operation by the operation nullification device.

10. The control apparatus according to claim 8, further comprising:
5 operation nullification canceller that cancels nullification of operation of the dummy switch by the operation nullification device if the vehicle has stopped.

11. The control apparatus according to claim 8, further comprising:
10 operation nullification canceller that cancels nullification of operation of the dummy switch by the operation nullification device if a predetermined time period has elapsed since the start of the nullification or if the vehicle has stopped.

12. The control apparatus according to claim 8, wherein:
15 the summation time period calculator is constructed to calculate the summation time period for information that is displayed after cancel of nullification of the operation.

13. The control apparatus according to claim 8, wherein:
20 the summation time period calculator is constructed to estimate a time period required to watch the displayed information, depending on the number of the dummy switches included in the information.

14. The control apparatus according to claim 8, further comprising:
25 first operation device for performing operation of the dummy switch based on a first action made by the operator; and
second operation device for performing operation of the dummy switch based on a second action made by the operator, the second action being

different from the first action,

wherein the summation time period calculator is constructed to estimate a time period required to watch the information, depending on whether the operation of the dummy switch is performed by the first operation device or
5 by the second operation device.

15. A control apparatus for input screens that is installed in a vehicle and constructed to input predetermined operation performed by an operator based on information displayed by display device as an operator guidance and change information to be displayed by the display device upon input of
10 the operator guidance, comprising:

operation nullification means for prohibiting the predetermined operation performed by the operator from being inputted as the operator guidance upon fulfillment of a predetermined condition; and

15 operation nullification cancel means for canceling prohibition against the inputting of the predetermined operation performed by the operator as the operator guidance if a predetermined time period has elapsed since the prohibition against the inputting of the predetermined operation performed by the operator as the operator guidance.

20 16. A control apparatus for input screens that is installed in a vehicle, comprising:

screen control means for causing display device to display information including a plurality of dummy switches and changing the information
25 displayed by the display device to information corresponding to the operated dummy switch; and

operation nullification means for nullifying operation of the dummy switch upon fulfillment of a predetermined condition and prohibiting information displayed by the display device from being changed based on the operation,

wherein the operation nullification means is constructed to judge whether or not the predetermined condition has been fulfilled, depending on the number of dummy switches included in information displayed by the display device.

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17. A control apparatus for input screens that is installed in a vehicle and constructed to cause display device to display information including a plurality of dummy switches and cause the display device to display new information corresponding to one of the dummy switches that has selectively been operated, comprising:

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summation time period calculation means for estimating a time period required for an operator to watch the displayed information to selectively operate one of the dummy switches included in the displayed information during a period from the start to the stop of the vehicle, estimating a time period required for the operator to watch newly displayed information to selectively operate one of a plurality of dummy switches included in the newly displayed information, and calculating a sum of the estimated time periods; and

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operation nullification means for nullifying operation performed by the operator for selection of one of a plurality of dummy switches included in the newly displayed information if the summation time period is longer than a reference time period, and prohibiting new information corresponding to the operated dummy switch from being displayed by the display device.

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18. A control method for input screens that is installed in a vehicle and constructed to input predetermined operation performed by an operator based on information displayed by display device as an operator guidance and change information to be displayed by the display device upon input of the operator guidance, comprising the steps of:

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prohibiting the predetermined operation performed by the operator from being inputted as the operator guidance upon fulfillment of a predetermined condition; and

canceling prohibition against the inputting of the predetermined operation performed by the operator as the operator guidance if a predetermined time period has elapsed since the prohibition against the inputting of the predetermined operation performed by the operator as the operator guidance.

19. A control method for input screens that is installed in a vehicle, comprising the steps of:

causing display device to display information including a plurality of dummy switches and changing the information displayed by the display device to information corresponding to the operated dummy switch;

judging whether or not the predetermined condition has been fulfilled, depending on the number of dummy switches included in information displayed by the display device; and

nullifying operation of the dummy switch upon fulfillment of a predetermined condition and prohibiting information displayed by the display device from being changed based on the operation.

20. A control method for input screens that is installed in a vehicle and constructed to cause display device to display information including a plurality of dummy switches and cause the display device to display new information corresponding to one of the dummy switches that has selectively been operated, comprising the steps of:

estimating a time period required for an operator to watch the displayed information to selectively operate one of the dummy switches included in the displayed information during a period from the start to the stop of the

vehicle;

estimating a time period required for the operator to watch newly displayed information to selectively operate one of a plurality of dummy switches included in the newly displayed information;

5 calculating a sum of the estimated time periods; and

nullifying operation performed by the operator for selection of one of a plurality of dummy switches included in the newly displayed information if the summation time period is longer than a reference time period, and prohibiting new information corresponding to the operated dummy switch
10 from being displayed by the display device.